



100

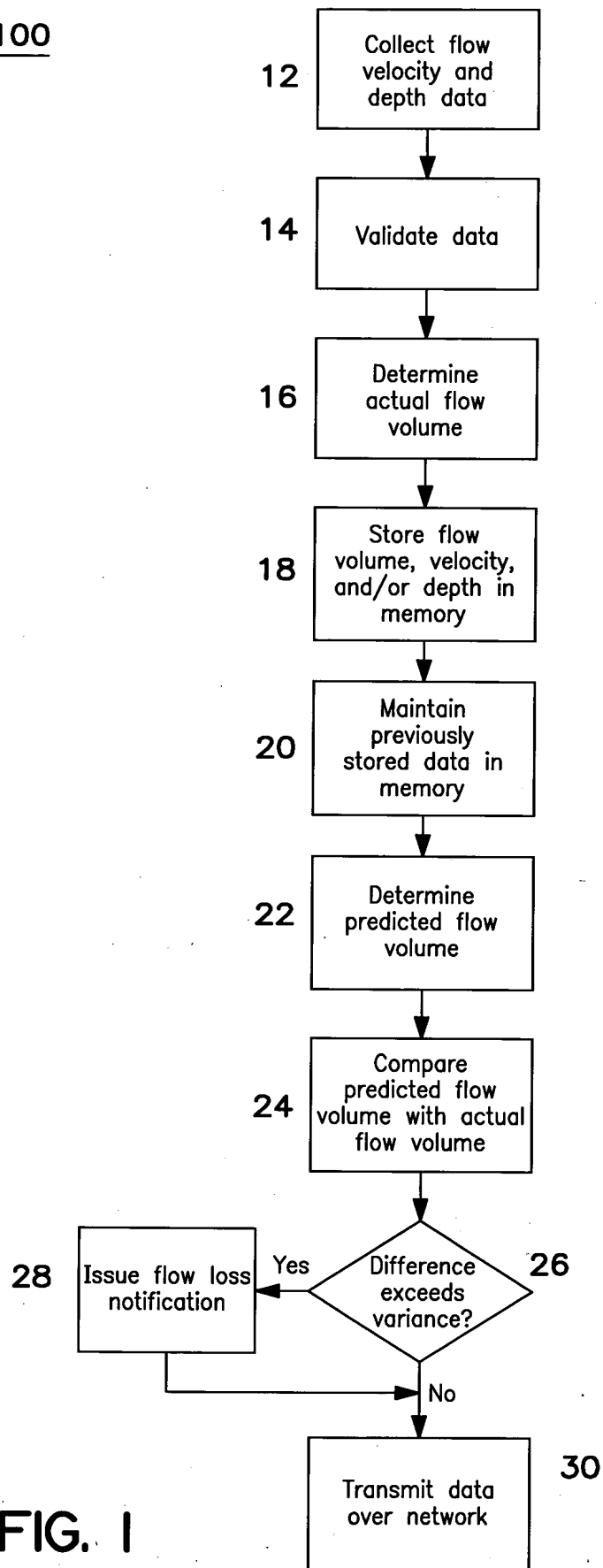


FIG. 1

Flow Loss Detection

The meter "learns" the typical flow pattern for weekends and weekdays

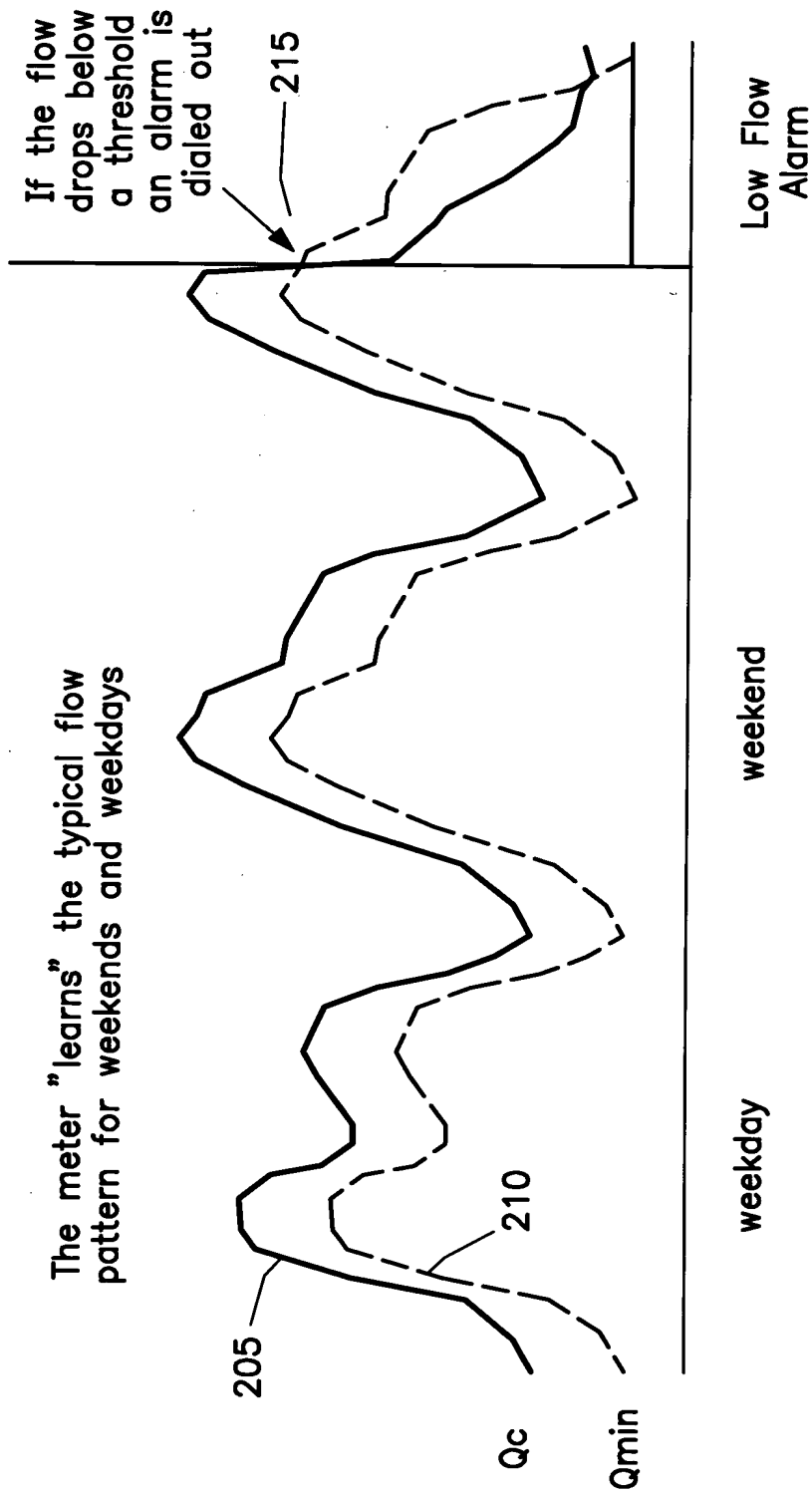


FIG. 2





Wet Weather Performance

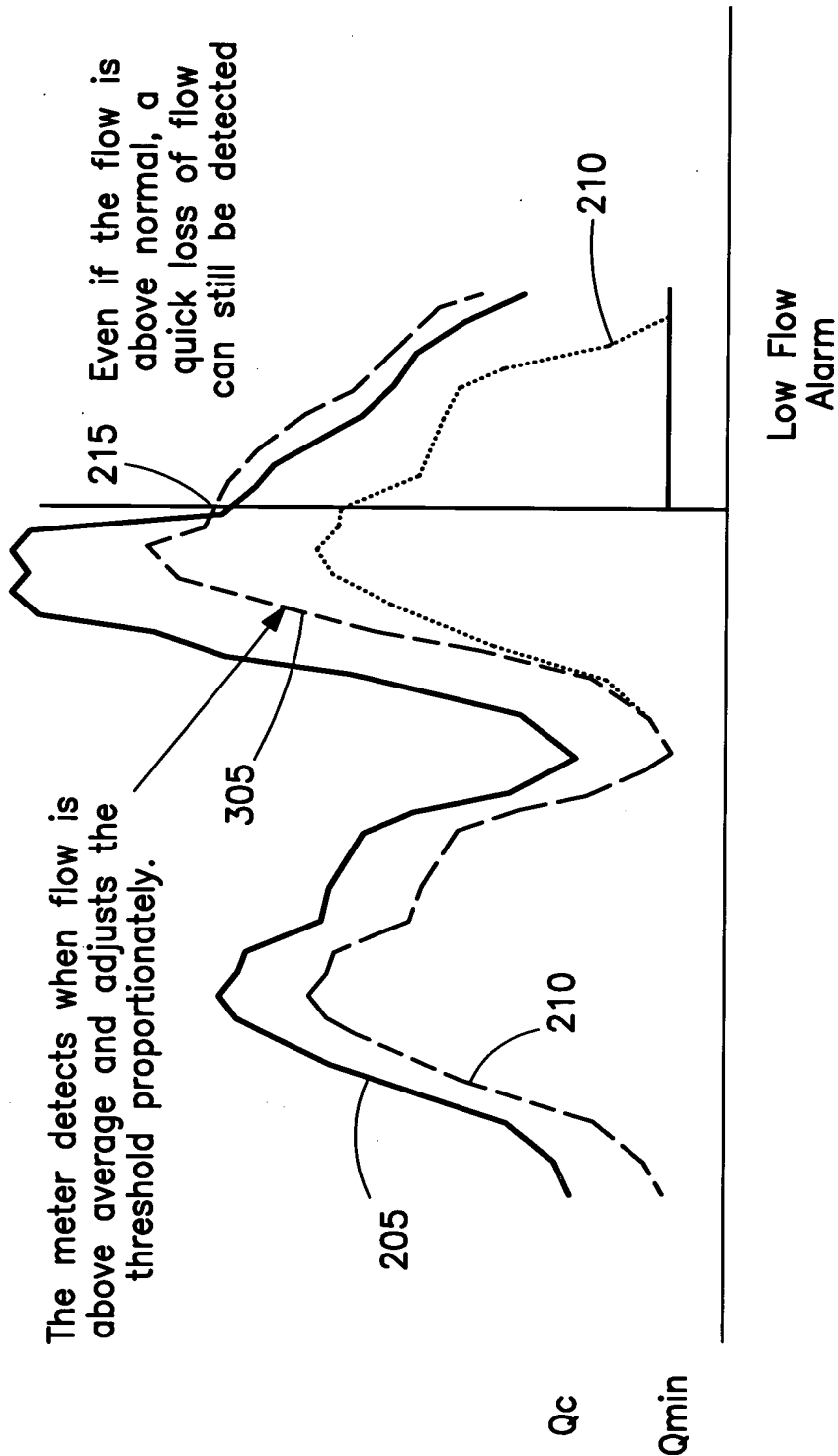


FIG. 3

Pump Stations or Industrial Flows

Instead of lowering the % threshold, a moving boxcar average is applied to the flow data in the meter.

Erratic flow could cause false alarms

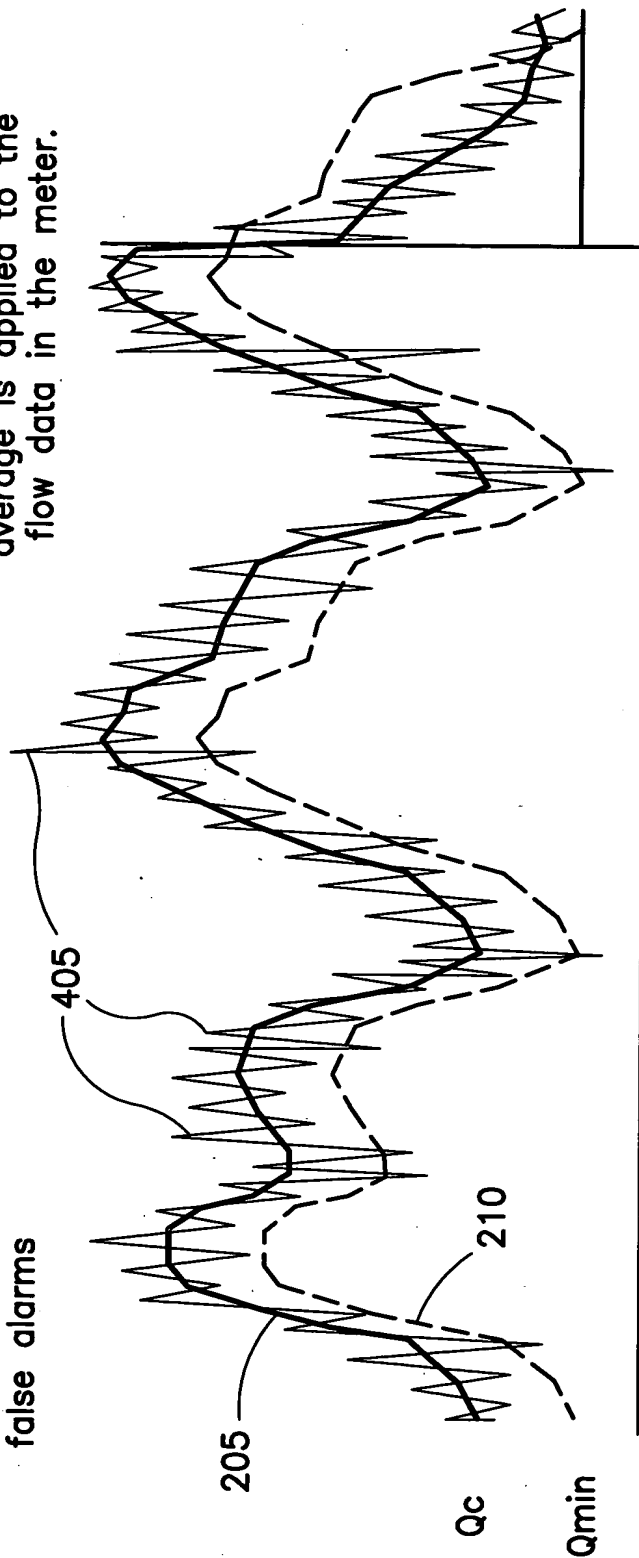


FIG. 4



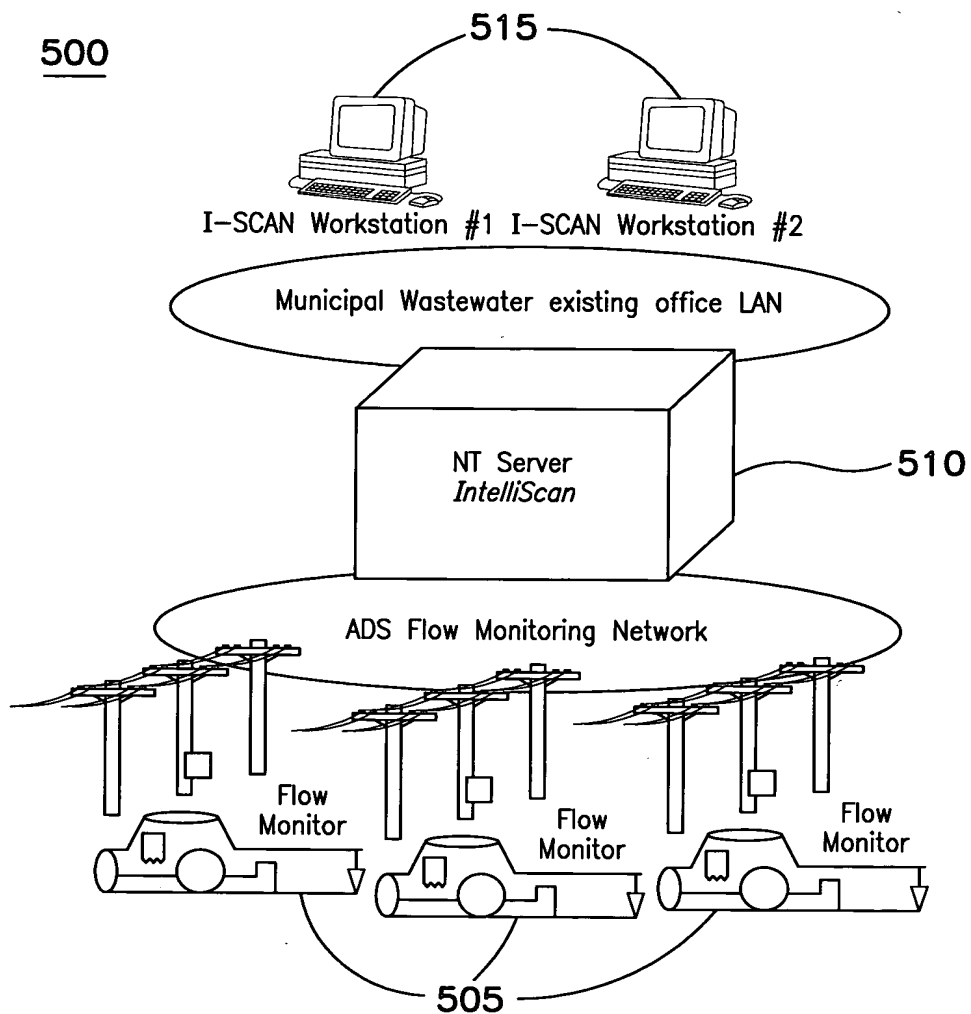
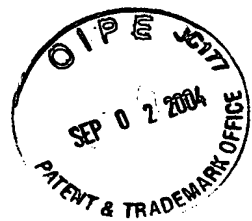


FIG. 5

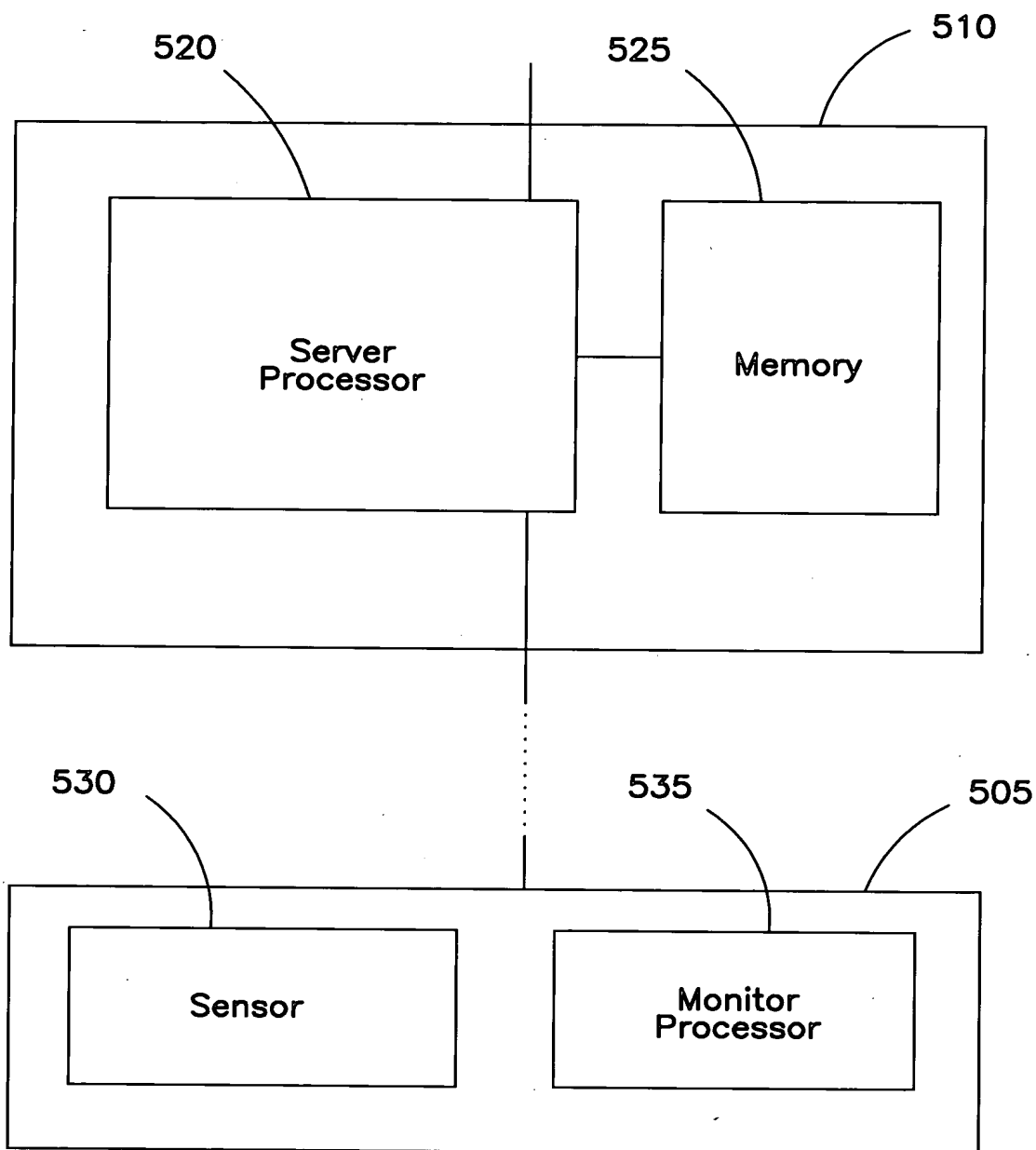
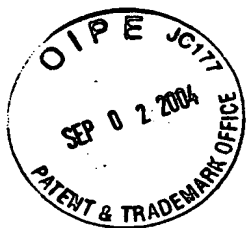


FIG. 5A

2000-01-01 10:00:00
2000-01-01 10:00:00
2000-01-01 10:00:00
2000-01-01 10:00:00
2000-01-01 10:00:00
2000-01-01 10:00:00



600

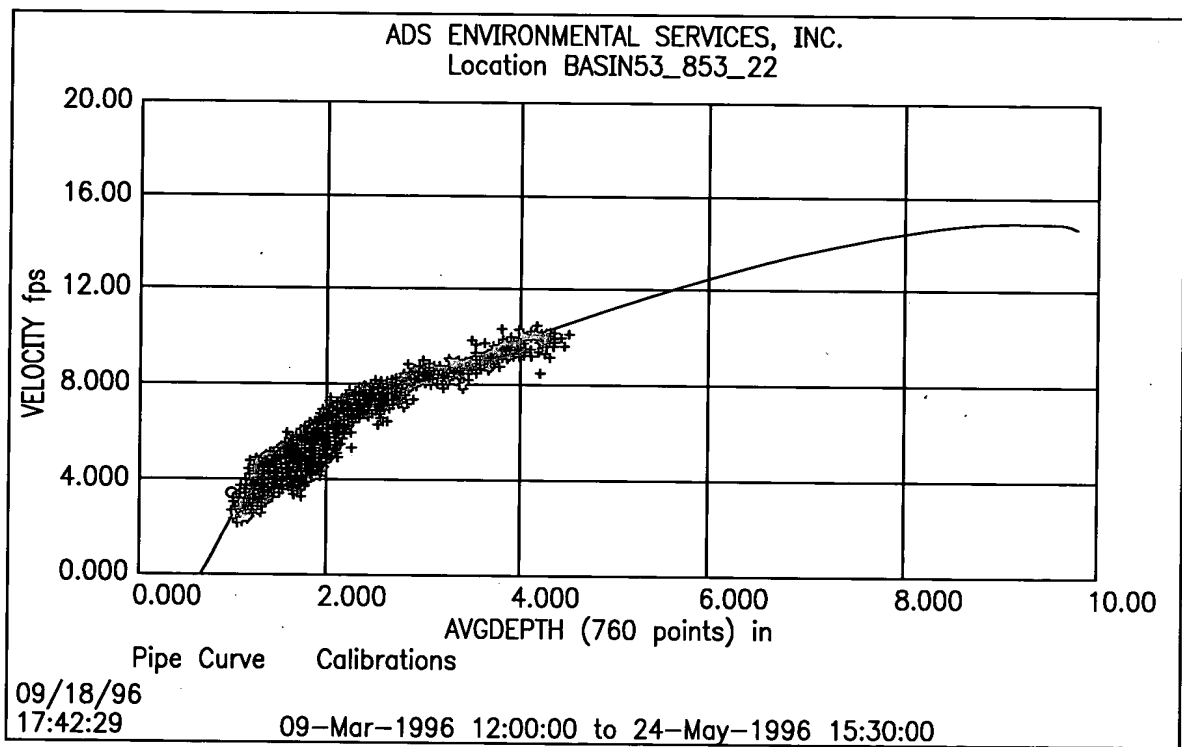
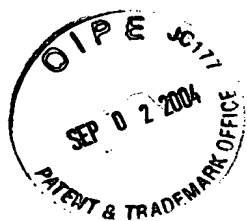


FIG. 6



700

FL08

DIAMETER=24"

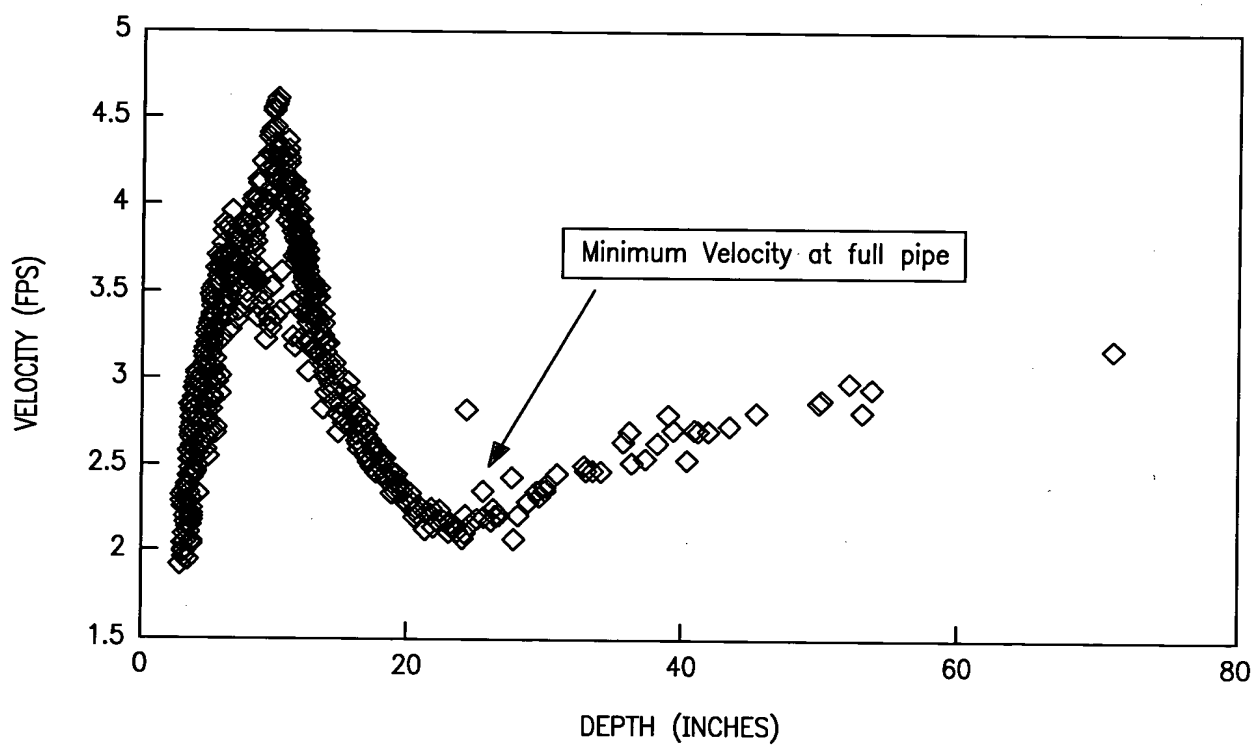


FIG. 7



800

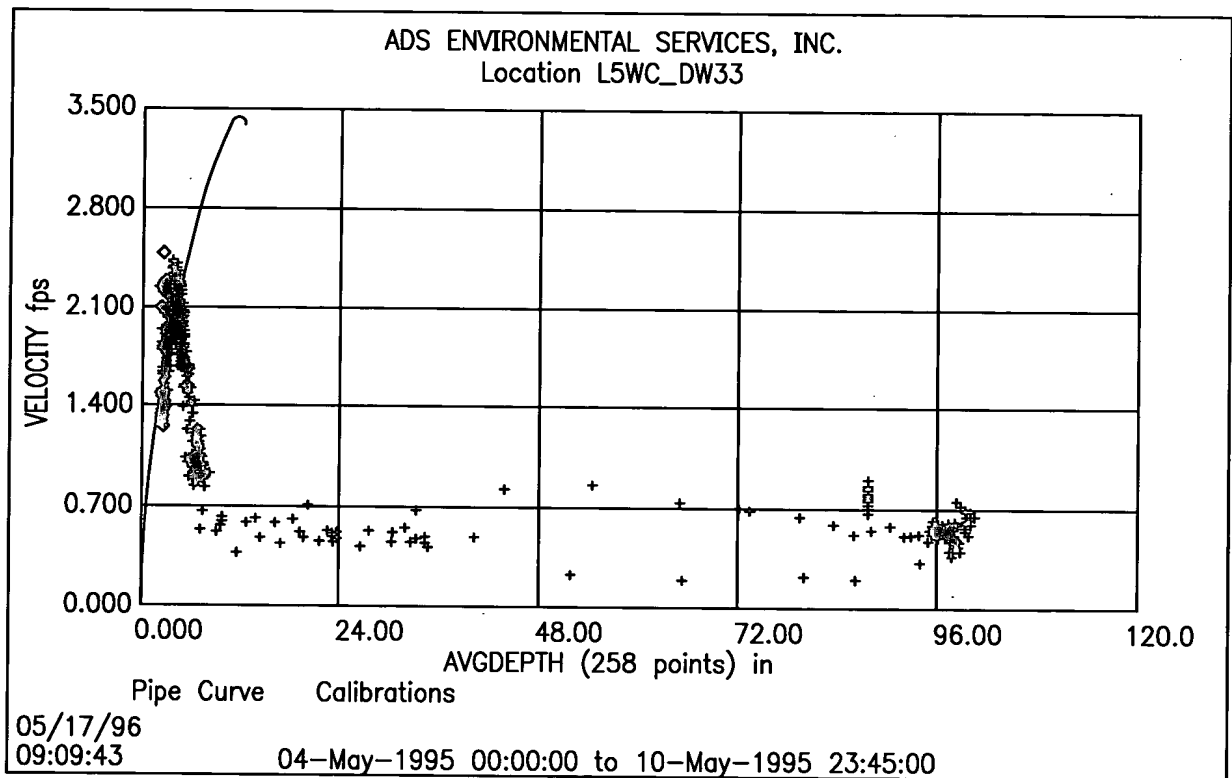


FIG. 8

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1000

Flow Monitor

MLI Event Notification
(data comm to I/Scan)

1003

E/M receives event
notification from flow
monitor. E/M calls
monitor and updates
24 hrs of data

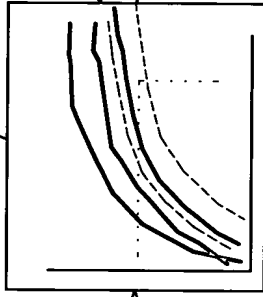
Interval Scan

24 hour Data Collect

1008

IntelliScan
analyzes & normalizes
Data and places
"scrubbed" data into data
table for use.

1005



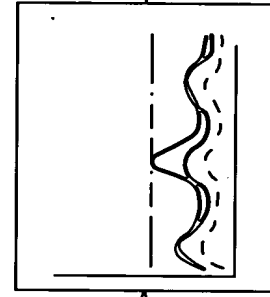
Internal Scan- E/M uses scrubbed
data to generate 3 depth vs velocity
profiles (24 hr, 48 hr, and 1 mo. Avg)
These are represented in a
scatterplot.

Event Notification- E/M plots the
alarm data point against the expected
hydraulic signature. If the point falls
within the hydraulic signature the
alarm is considered valid and an
alarm callout is triggered.

For alarm events
E/M determines
priority & processes
as appropriate.

E/M stores updated
Plots in data table for
recall when queries are
launched. This is for
Plots and Performance reports

1015



1010

E/M generates an avg
H/plot for w/day, w/end or
h/day. Using "scrubbed"
data E/M generates a
H/graph of past of data
avg's (w/day, w/end, hol)
Past 24 hrs H/graph is
plotted against avg E/M
evaluates graphs against
high / low limits.

FIG. 10